

# Plant-Based Diets in Crohn's Disease

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Re: Tuso PJ, Ismail MH, Ha BP, Bartolotto C. Nutritional update for physicians: plant-based diets. *Perm J* 2013 Spring;17(2):61-6. DOI: <http://dx.doi.org/10.7812/TPP/12-085>.

Dear Editor,

There are a lot of papers on plant-based diets by researchers, nutritionists, or specialists in the fields, but there is a paucity of comprehensive review for physicians. Therefore, we enjoyed greatly the article, "Nutritional update for physicians: plant-based diets." Tuso et al<sup>1</sup> recommend a plant-based diet to all patients, especially those with hypertension, diabetes, cardiovascular disease, or obesity.

We want to comment on our experience of a plant-based diet in treating Crohn's disease (CD). Symptoms of CD subside easily with total parenteral nutrition or total enteral nutrition. But CD is well known to flare up after the resumption of meals. Therefore, meals *per se* are thought to cause gut inflammation. Takagi et al<sup>2</sup> named their therapy "half elemental diet." Generally, the more the amount of the elemental diet, the less the relapse rate is. Consequently, about half of the daily energy is provided by an elemental diet, which is a standard regimen in quiescent CD in Japan.<sup>2</sup> Relapse rates with an "elemental diet" occur at the rate of 27% at one year,<sup>2</sup> whereas the control group rate is 60% to 70% in the studies by Takagi et al<sup>2</sup> and Sandborn et al.<sup>3</sup> When more than 30 kcal/kg ideal body weight/day of elemental diet is given, the remission rate at 1 year is about 95%.<sup>4</sup> However, increasing the amount of elemental diet decreases the quality of life. We regard CD as a lifestyle-related disease mainly mediated by Westernized diets, which tend to cause dysbiosis in gut microflora.<sup>5</sup> Namely, the greatest environmental factor in CD is diet-associated gut microflora.<sup>6</sup> A design for increasing beneficial bacteria led us to a semivegetarian diet (SVD): lacto-ovo-vegetarian with fish once a week and meat once every two weeks.<sup>5</sup> SVD and infliximab induction therapy were initiated simultaneously. Patients were admitted until completion of standard induction therapy of infliximab. Patients were advised to continue the SVD after discharge. Relapse rates at 1 year and 2 years were 0% and 8% in patients on SVD and 33% and 75% in patients on an omnivorous diet. These results were obtained in the absence of scheduled infliximab maintenance therapy or immunosuppressive agents,<sup>5</sup> and they are far better than the scheduled infliximab maintenance therapy.<sup>7</sup> SVD is provided during hospitalization and is recommended not only in CD but also in other intestinal diseases including ulcerative colitis<sup>8-10</sup> and cytomegalovirus enteritis.<sup>11</sup>

As Tuso et al<sup>1</sup> pointed out, current diseases are a reflection of our lifestyle, particularly a Westernized diet, in wealthy nations.<sup>12</sup> Diet reviews recommend plant-based diets to treat and prevent a variety of common diseases. Inflammatory bowel disease (IBD) is not an exception. However, evidence level of our study is not enough to make gastroenterologists appreciate the efficacy of a plant-based diet in IBD. Clinical studies providing high levels of evidence showing the efficacy of a plant-based diet in IBD is eagerly awaited. ♦

Yours sincerely,

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